

Claims

I claim

1. A protective bed unit comprising:

a frame including a headboard and at least one actuator base;

shielding material forming a canopy and leg cover to create a protective chamber and attached to said frame;

at least one door hingably affixed to said shielding material for allowing ingress and egress to the protective chamber; and

a ventilation system having ductwork passing through said shielding material for filtering air that passes into the protective chamber, said ventilation system including at least one filter, a fan and an electronically actuated valve.

2. The protective bed unit of claim 1 further comprising a rebreather located within the protective chamber for scrubbing carbon dioxide from air circulated through the rebreather.

3. The protective bed unit of claim 1 further comprising at least one cover actuator for opening the canopy, said actuator including a base plate attached to said actuator base and a lift plate attached to said shielding material.

4. The protective bed unit of claim 1 further comprising a door actuator attached between said shielding material and said door and for opening and closing said door.

5. The protective bed unit of claim 4 wherein said door actuator includes a quick release mechanism for allowing an operator to disengage the actuator from the door such that the door may be opened manually.
6. The protective bed unit of claim 1 further comprising a controller for controlling operation of the ventilation system and opening and closing of the shielding material and door.
7. The protective bed unit of claim 6 further comprising sensors connected to said controller for detecting different environmental conditions.
8. The protective bed unit of claim 1 further comprising seals located on at least one edge of said door and for sealing the unit when said door is closed.
9. A protective bed unit comprising:
- a frame including a headboard and at least one actuator base;
 - shielding material forming a canopy and leg cover to create a protective chamber and attached to said frame;
 - at least one door hingably affixed to said shielding material for allowing ingress and egress to the protective chamber;
 - a ventilation system having duct work passing through said shielding material for filtering air that passes into the protective chamber, said ventilation system including at least one filter, a fan and an electronically actuated valve;

a rebreather located within the protective chamber for scrubbing carbon dioxide from air circulated through the rebreather;

at least one cover actuator for opening the canopy, said actuator including a base plate attached to said actuator base and a lift plate attached to said shielding material;

a door actuator attached between said shielding material and said door and for opening and closing said door, said door actuator includes a quick release mechanism for allowing an operator to disengage the actuator from the door such that the door may be opened manually;

a controller for controlling operation of the ventilation system and opening and closing of the shielding material and door;

at least one seal in contact with an edge of said door and for sealing the protective chamber; and

sensors connected to said controller for detecting different environmental conditions.

10. A protective bed unit comprising:

a protective chamber surrounded by shielding material;

a frame attached to said shielding material;

a door for providing access to said protective chamber;

a ventilation system for filtering air that passes into said protective chamber; and

a seal in contact with said door for sealing the protective chamber when the door is closed.

11. The protective bed unit of claim 10 further comprising a frame having a headboard and at least one actuator base.

12. The protective bed unit of claim 10 wherein said shielding material forms a canopy and leg cover.

13. The protective bed unit of claim 10 wherein said ventilation system includes at least one filter, a fan and an electronically actuated valve.

14. The protective bed unit of claim 10 further comprising a rebreather located with the protective chamber for scrubbing carbon dioxide from air circulated through the rebreather.

15. The protective bed unit of claim 10 further comprising at least one cover actuator for opening the canopy, said actuator including a base plate attached to said actuator base and a lift plate attached to said shielding material.

16. The protective bed unit of claim 10 further comprising a door actuator attached between said shielding material and said door and for opening and closing said door.

17. The protective bed unit of claim 16 wherein said door actuator includes a quick release mechanism for allowing an operator to disengage the actuator from the door such that the door may be opened manually.

18. The protective bed unit of claim 10 further comprising a controller for controlling operation of the ventilation system and opening and closing of the shielding material and door.

19. The protective bed unit of claim 18 further comprising sensors connected to said controller for detecting different environmental conditions.